

REMARKS

Claims 1-9 are pending in the Application.

Claims 1-9 stand rejected.

Claims 15-20 have been added.

I. REJECTIONS UNDER 35 U.S.C. § 102.

Claims 1-4, 6 and 9 stand rejected under 35 U.S.C. § 102(b) as being clearly anticipated by *Baylor et al.* In response, Applicants respectfully traverse this rejection. As the Examiner is well aware, for a claim to be anticipated under § 102, every element of the claim must be found within the cited prior art reference.

Claim 1 recites that all of the field emission material deposited on the first substrate in the predefined pattern on a permanent basis emits electrons on a continuous basis when activated. The Examiner asserts that when a current is applied to the emitters 431-434 in *Baylor*, they continuously emit electrons. Applicants respectfully disagree. The device in *Baylor* is a digitally addressable array of electron emitters configurable in a variety of shapes so that when a particular shape of an electron beam is desired, selected ones of the electron emitters will be activated to create such desired shape. In such a case, there will be certain ones of the electron emitters that are not activated. So, for example, the *Baylor* invention of FIGURE 5 overcomes the prior art shown in FIGURE 3 of *Baylor* whereby if a T design is desired, the square-shaped electron beam will have to be repeated for various portions of the T design. With the *Baylor* invention, only the emitters 431-434 making up the T design will be activated so that the entire T design can be emitted as an electron beam in that shape. In such a case, there will be electron emitters that are not activated in *Baylor*. Claim 1 recites that all of the field emission material will emit electrons on a continuous basis when activated. This is not taught within *Baylor*, since *Baylor* teaches that not all of the field emitters will be addressed to emit electrons, but instead, some of them will not be activated to define the desired pattern.

The Examiner responds to the foregoing by citing column 7, lines 53-68 that turn-on and turn-off of the entire matrix is accomplished by switching means 440 and that individual emitter control can be processed by connection 530 to each individual emitter. Bias grid 440 is only there to turn-on the field emitter array 445, but *Baylor* clearly discloses that each individual emitter is controlled to be either on or off in order to create the pattern desired. Col. 8, lines 1-12. Claim 1 specifically recites that the field emission material is deposited on the substrate on a permanent basis in the pre-defined pattern and that all of such field emission material emits electrons on a continuous basis when activated. This is not true in *Baylor*, since some of the field emitters described in *Baylor* will not be activated. Claim 1 further recites that when the electric field is established, the active field emission material emits electrons towards the electron beam resist layer in order to modify the electron beam resist layer in the pattern. Again, claim 1 recites that all of this field emission material is activated by the electric field, whereas in *Baylor*, the electric field only activates individual emitters in a matrix addressable manner to emit electrons in the desired pattern.

With respect to claim 4, the Examiner has asserted that *Baylor* teaches the recited conductive layer 520 between the first substrate and the field emitters. Applicants disagree since 520 is not a conductor, but is instead a logic and memory circuit to control each emitter. Col. 8, lines 24-27.

With respect to claim 6, the Examiner is again attempting to assert that grid 440 is deposited on the hatched layer which is deposited on substrate 510, and thus the grids are deposited on the substrate. Applicants again respectfully disagree. The Examiner is not giving the terminology in claim 6 a reasonable and ordinary meaning. To be deposited "on" means that a layer is positioned over and in contact with the substrate. The definition of "on" is "used as a function word to indicate a position over and in contact with" such as in "the book is on the table." WEBSTER'S NEW COLLEGIATE DICTIONARY, Copyright 1979.

II. REJECTIONS UNDER 35 U.S.C. § 103

Claim 5 stands rejected under 35 U.S.C. § 103 as being unpatentable over *Baylor* in view of *Park* (U.S. Patent No. 5,743,998). In response, Applicants respectfully traverse this rejection. Claim 5 recites that the establishing circuitry further comprises a conductive layer between the second substrate and the electron beam resist layer. The Examiner admits that *Baylor* does not teach this limitation, but asserts that *Park* does. The Examiner cites to column 2, lines 3-28 of *Park*. The problem with the Examiner's assertion is that there is no substrate disclosed in *Park*. There is merely a resist media deposited on the conductive layer. Thus, *Park* only teaches two layers, while the present invention, as recited in claim 5 recites three layers, the resist layer, the conductive layer, and the substrate. Thus, one skilled in the art at the time the invention was made would not have been able to recreate the invention as specifically recited in claim 5.

Claim 7 and 8 stand rejected under 35 U.S.C. § 103 as being unpatentable over *Baylor*. Applicants respectfully traverse these rejections. Claim 7 recites that the conductive or dielectric material covers edges of the field emitter. Claim 8 recites that the surface of the conductive or dielectric material is co-planar with an emitting surface of the field emitter. The Examiner merely cites language in *Baylor* that it is within the level of ordinary skill in the art to provide emitters and grid elements of any shape so long as a suitable emitting field is produced. However, this language does not teach or suggest a conductive or dielectric material covering edges of the field emitter that is recited in claims 1 and 6, nor does this language teach or suggest a surface of the conductive or dielectric material is co-planar with an emitting surface of the field emitter. One skilled in the art at the time the invention was made would not have been able to recreate these inventions as specifically recited within these claims in view of a broad statement that emitters and grid elements can be any shape. The Examiner is essentially just asserting that claims 7 and 8 would have been obvious without any objective support for his assertions. These limitations are not

found within the art cited by the Examiner, and thus the Examiner has not proven a *prima facie* case of obviousness in rejecting these claims.

III. NEW CLAIMS

Applicants have added new claims, which recite elements that are not taught or discussed within any of the cited prior art.

III. CONCLUSION

As a result of the foregoing, it is asserted by Applicants that the remaining Claims in the Application are in condition for allowance, and respectfully request an early allowance of such Claims.

Applicants respectfully request that the Examiner call Applicants' attorney at the below listed number if the Examiner believes that such a discussion would be helpful in resolving any remaining problems.

Respectfully submitted,

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